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10/670,326	09/26/2003	Yong Cheol Park	0465-1030P	5080

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EXAMINER

BIBBINS, LATANYA

ART UNIT	PAPER NUMBER
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2627

NOTIFICATION DATE	DELIVERY MODE
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12/06/2007

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary

Application No.

10/670,326

Applicant(s)

PARK ET AL.

Examiner

LaTanya Bibbins

Art Unit

2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 September 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5, 7, 9-21, 23 and 25-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 7, 9-21, 23 and 25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 September 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date. _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. In the remarks filed on September 14, 2007, Applicant amended claims 1-3, 5, 17, 18, 21, 25, 30, and 32, cancelled claims 4, 6, 8, 22, and 24, added claims 33 and 34, and submitted arguments for allowability of pending claims 1-3, 5, 7, 9-21, 23, and 25-34.

Priority

2. Acknowledgment is made of applicant's claim for foreign priority based on application 10-2002-0058515 filed in Korea on September 26, 2002 and application 10-2003-0002330 filed in Korea on January 14, 2003.

While a certified English translations of Korean application 10-2003-0002330 and the abstract of Korean application 10-2002-0058515 were received, it is noted that applicant has not filed a certified English translation of the complete Korean application 10-2002-0058515 as required by 35 U.S.C. 119(b). (Note that a certified English translation of the specification, claims, and drawings of Korean application 10-2001-0001856 were filed instead)

Should applicant desire to obtain the benefit of foreign priority under 35 U.S.C. 119(a)-(d) prior to declaration of an interference, a certified English translation of the foreign application must be submitted in reply to this action. 37 CFR 41.154(b) and 41.202(e).

Failure to provide a certified translation may result in no benefit being accorded for the non-English application.

Response to Arguments

3. Applicant's arguments with respect to claims 1-3, 5, 7, 9-21, 23, and 25-34 have been considered but are moot in view of the new grounds of rejection.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. **Claims 1, 9-11, 17, 25, 26, and 32-34 are rejected under 35 U.S.C. 102(b) as being anticipated by Park (US PGPub 2001/0009537 A1).**

Regarding claim 1, Park discloses a method for managing an optical recording medium having at least one defective area in a user data area, said method comprising:

recording data recorded in the defective area in a spare area of the optical recording medium as replacement data (Figure 1 and paragraph [0028]) and providing a first temporary defect list having a defect entry for the at least one defective area (see Figure 1 and the PDL and SDL described in paragraph [0029]);

recording, in a temporary defect management area, a cumulative temporary defect list for an additional defective area in the user data area, wherein the cumulative temporary defect list includes the first temporary defect list previously recorded and at least one additional defective entry for any additional defective area (see the discussion

in paragraphs [0030]-[0034] where the PDL and SDL store multiple entries corresponding to defective and replacement sectors); and

recording latest cumulative temporary defect list recorded in the temporary defect management area in a final defect management area when the recording medium is to be finalized (see paragraphs [0030]-[0034] and the discussion of the PDL and SDL located in the DMA; since the SDL, which is located in the DMA, is updated at the recording time the location of the defect information that remains when recording is ended is considered the "final defect management area").

Regarding claim 9, Park discloses the method according to claim 1, wherein each of the first temporary defect list and the cumulative temporary defect list includes management information for the data within the respective defective areas (see paragraphs [0030]-[0034] where the PDL and SDL entries comprises sector numbers corresponding to the defective sector and sectors to be subjected to the replacement process).

Regarding claim 10, Park discloses the method according to claim 9, wherein the management information includes a first physical sector number of the replacement data for each defect entry and a first physical sector number of a defective area for each defect entry (see paragraphs [0030]-[0034] where the PDL and SDL entries comprises sector numbers corresponding to the defective sector and sectors to be subjected to the replacement process).

Regarding claim 11, Park discloses the method according to claim 1, wherein the spare area of the optical recording medium includes an inner spare area and an

outer spare area (see Figures 4A and 4B and the discussion of the primary and supplement spare areas in paragraphs [0038] and [0041]), and the step of recording data recorded in the defective area utilizes at least one of the inner spare area and the outer spare area (paragraph [0040]).

Regarding claim 17, Park discloses a recording medium comprising: at least one spare area within a data area (see Figure 1);

a temporary defect management area for managing replacement data of at least one defective area within a user data area of the data area (see the DMA areas in Figure 1 and paragraph [0031]);

a cumulative temporary defect list stored within the temporary defect management area, wherein the cumulative temporary defect list includes management information for the replacement data of said at least one defective area cumulatively recorded and management information for replacement data for at least one additional defective area of the user data area (see the discussion in paragraphs [0030]-[0034] where the PDL and SDL store multiple entries corresponding to defective and replacement sectors) and

a final defect management area for storing latest cumulative temporary defect list recorded in the temporary defect management area when the recording medium is to be finalized (see paragraphs [0030]-[0034] and the discussion of the PDL and SDL located in the DMA; since the SDL, which is located in the DMA, is updated at the recording time the location of the defect information that remains when recording is ended is considered the "final defect management area").

Regarding claim 25, Park discloses the recording medium according to claim 17, wherein each of the management information of the cumulative temporary defect list includes a first physical sector number of the replacement data for each defect entry and a first physical sector number of a defective area for each defect entry (see paragraphs [0030]-[0034] where the PDL and SDL entries comprises sector numbers corresponding to the defective sector and sectors to be subjected to the replacement process).

Regarding claim 26, Park discloses the recording medium according to claim 17, wherein the at least one spare area includes an inner spare area and an outer spare area (see Figures 4A and 4B and the discussion of the primary and supplement spare areas in paragraphs [0038] and [0041]), and the replacement data for the at least one defective area is located in at least one of the inner spare area and the outer spare area (paragraph [0040]).

Claim 32 is drawn to the apparatus corresponding to the method of using same as claimed in claim 1. Therefore apparatus claim 32 corresponds to method claim 1, and is rejected for the same reason of anticipation as used above.

Regarding claim 33, Park discloses a method for managing an optical recording medium having at least one defective area in a user data area, said method comprising:
recording data recorded in the defective area in a spare area of the optical recording medium as replacement data (Figure 1 and paragraph [0028]);

recording a first data block in a temporary defect management area, the first data block including a first defect list comprising one or more first defect entry and access

information, the first defect entry including position information of defective area and a replacement area of the spare area and the access information indicating the position of the first defect list (see the description of the SDL in paragraphs [0029], and [0032]-[0034] particularly where the SDL entries comprises sector numbers corresponding to the defective sector and sectors to be subjected to the replacement process); and

recording a second data block in the temporary defect management area, the second data block including a second defect list comprising a plurality of defect entries and access information, the plurality of defect entries including the first defect entry and a new second defect entry and the access information indicating the position of the second defect list, the new second defect entry including position information of new defective area and a new replacement area of the spare area (see the description of the PDL in paragraphs [0029]-[0031], particularly where the PDL entries comprises sector numbers corresponding to the defective sector and sectors to be subjected to the replacement process, and Figure 5B and the discussion in paragraphs [0049]-[0052] where the SDL entries are moved to the new PDL),

wherein the first data block, the second data block and the next data block are recorded in different areas of the temporary defect management area (see Figure 1 and the discussion in paragraph [0029] where the PDL is located in the first block of the DMA and the SDL is located in the second block of the DMA).

Regarding claim 34, Park discloses the method of claim 33, wherein the first data block is a single data unit (see the description of the SDL in paragraphs [0029], and [0032]-[0034]).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claims 2, 3, 5, 12, 16, 18-21, 27, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable Park (US PGPub 2001/0009537 A1) in view of Ohata et al. (US Patent Number 6,469,978 B1).**

Regarding claim 2, Park discloses the method according to claim 1, as noted in the 35 U.S.C. 102(b) rejection above, but does not disclose recording information for accessing the cumulative temporary defect list as temporary disc definition structure information in a temporary disc definition structure area of the temporary defect management area. Ohata, however, discloses recording information for accessing the cumulative temporary defect list as temporary disc definition structure information in a temporary disc definition structure area of the temporary defect management area (column 1 lines 33-38).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the disc definition structure as taught by Ohata into the method of Park. One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings in order to produce a recording medium whose data format is in line with the standard of conventional optical discs (see column 1 lines 15-23).

Regarding claim 3, Park discloses wherein the cumulative temporary defect list and the temporary disc definition structure information are recorded in the same area of the temporary defect management area (see Figure 1 and the discussion paragraph [0029], specifically regarding the DDS, PDL, and SDL).

Regarding claim 5, Park disclose recording the temporary disc definition structure information in the final defect management area when the recording medium is to be finalized (see Figure 1 where the DDS is located in the DMA and paragraphs [0030]-[0034] particularly the discussion of the PDL and SDL located in the DMA; since the SDL, which is located in the DMA, is updated at the recording time the location of the defect information that remains when recording is ended is considered the "final defect management area").

Regarding claim 12, Park discloses the method according to claim 1, as noted in the 35 U.S.C. 102(b) rejection above. Additionally, Park discloses wherein the cumulative temporary defect list is repeatedly recorded (see paragraph [0059] where the PDL registration can be continuously performed) but does not specifically disclose that the cumulative temporary defect list is repeatedly recorded in at least two areas of the optical recording medium. Ohata, however, discloses a method for managing an optical recording medium having at least one defective area in a user data area wherein the defect list is recorded in at least two areas of the optical recording medium (see column 8 lines 39 and 40 where the DMA contains a defect list, and further in column 7 lines 47 and 48 where multiple DMA's have identical contents).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate recording the defect list in at least two areas of the optical recording medium as taught by Ohata into the method of Park. One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings in order to increase reliability (see Ohata column 7 lines 47 and 48).

Regarding claim 16, Park discloses recording temporary disc definition structure information in a lead-in area of the optical recording medium (see paragraph [0029] where the DMA, which is located in the lead-in area, includes a disc definition structure).

Regarding claim 18, Park discloses the recording medium according to claim 17, as noted in the 35 U.S.C. 102(b) rejection above. In addition, Park discloses a temporary disc definition structure within a lead-in area of the recording medium (see paragraph [0029] where the DMA, located in the lead-in area, includes a disc definition structure), but does not specifically disclose wherein the recording information for accessing the cumulative temporary defect list is stored as temporary disc definition structure information within the temporary disc definition structure. Ohata, however, discloses wherein recording information for accessing the cumulative temporary defect list is stored as temporary disc definition structure information within the temporary disc definition structure (column 1 lines 33-38).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the disc definition structure as taught by Ohata into the recording medium of Park. One of ordinary skill in the art at the time the

invention was made would have been motivated to combine the teachings in order to produce a recording medium whose data format is in line with the standard of conventional optical discs (see column 1 lines 15-23).

Regarding claim 19, Park discloses wherein the cumulative temporary defect list and the temporary disc definition structure information are recorded in the lead-in area of the optical recording medium (see Figure 1 and paragraph [0029] where the DMA, which is located in the lead-in area, includes a DDS, PDL, and SDL).

Regarding claim 20, Park discloses wherein the cumulative temporary defect list and the temporary disc definition structure information are recorded in a temporary defect management area of the optical recording medium (see Figure 1 and the discussion paragraph [0029], specifically regarding the DDS, PDL, and SDL).

Regarding claims 21, 27 and 31, these claims contain limitations similar to those in claims 5, 12 and 16, respectively, and are rejected for the same reasons of obviousness as used above.

8. Claims 7 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable
Park (US PGPub 2001/0009537 A1) in view of Lee et al (US Patent Number
6,934,236 B2).

Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

Regarding claim 7, Park discloses the method according to claim 1, as noted in the 35 U.S.C. 102(b) rejection above, but does not disclose wherein the optical recording medium is a Blu-ray disc of writable once type (BD-WO). Lee, however, discloses a storage medium with defect management wherein the optical recording medium is a Blu-ray disc of writable once type (BD-WO) (column 8 lines 28-33 and Figure 1).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Lee and Park. One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings in order to provide capability for discs shown or created in the future (Lee column 8 lines 28-33).

Regarding claim 23, this claim contains limitations similar to those in claim 7, and is rejected for the same reason of obviousness as used above.

9. Claims 13-15 and 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Park (US PGPub 2001/0009537 A1) and Ohata et al. (US Patent Number 6,469,978 B1), as applied to claims 12, and 28 above, and further in view of Takahashi (US PGPub 2002/0136537 A1).

Regarding claim 13, Park and Ohata disclose the method according to claim 12, but do not disclose wherein the at least two areas of the optical recording medium are a portion of a data area and a lead-in area of the optical recording medium. Takahashi, however, discloses wherein the at least two areas of the optical recording medium are a

portion of a data area and a lead-in area of the optical recording medium (see the discussion in paragraphs [0074] and [0076] where two or more DMAs may be simultaneously rewritten and the DMA can be moved to another area or two positions).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings Park and Ohata with that of Takahashi. One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings in order to maintain the reliability of the data stored in the DMA without multiple writes of the DMA (Takahashi paragraph [0074]).

Regarding claim 14, Park and Ohata disclose the method according to claim 13, but do not disclose wherein the portion of the data area is an area adjacent to an outer spare area of the optical recording medium. Takahashi, however, discloses wherein the portion of the data area is an area adjacent to an outer spare area of the optical recording medium (see the discussion in paragraphs [0074] and [0076] where two or more DMAs may be simultaneously rewritten and the DMA can be moved to another area or two positions).

Regarding claim 15, Park and Ohata disclose the method according to claim 12, but do not disclose wherein the at least two areas of the optical recording medium are front and end parts of a data area of the optical recording medium. Takahashi, however, discloses wherein the at least two areas of the optical recording medium are front and end parts of a data area of the optical recording medium

Regarding claims 28, 29 and 30, these claims contain limitations similar to those in claims 13, 14 and 15, respectively, and are rejected for the same reasons of obviousness as used above.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LaTanya Bibbins whose telephone number is (571) 270-1125. The examiner can normally be reached on Monday through Friday 7:30 am - 5:00 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on 571 272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


LaTanya Bibbins

/Wayne Young/
SPE AU 2627